

source. Fig. 2 shows an arrangement comprising three pulse generators of the type shown in Fig. 1 all charged in parallel and discharged in series. The folded-back foil 6 is replaced by a single foil 6A. The pulse is initiated by a breakdown of spark gaps at points X. Fig. 5 (not shown) relates to another multiple line circuit.

Fig. 4 shows a pulse generator comprising a pair of strip transmission lines formed by copper sheets 48, 8, 9 separated by a block 42 of polymethylmethacrylate. The lines are charged in parallel from a capacitor 56 charged by a Cockcrott-Walton generator (not shown) discharged into the pulse generator by lowering the sphere 53 so as to break down the spark gap 51, 52. Charging of the lines in parallel causes breakdown of three spark gap devices such as 17, 22 (of the type described in Specification 988,777) so that the lines are discharged in series as described above.

1,087,933. Pulse generating circuits. UNITED KINGDOM ATOMIC ENERGY AUTHORITY. Oct. 5, 1961 (Oct. 10, 1963) No. 39995/03. Addition to 975,911. Heading H3P

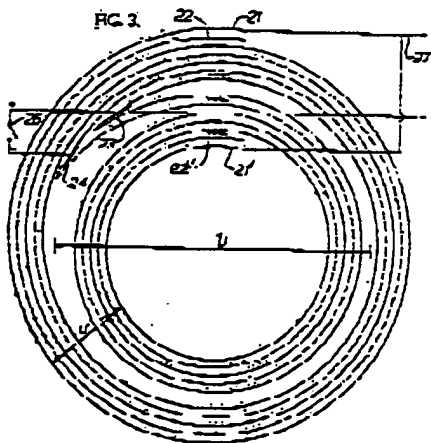
A pulse generator comprised two pairs of mutually insulated electrically conducting sheets 31, 33, 31, 33 rolled together to form two pairs of strip transmission lines, on of said pairs being located concentrically within the other and switch means (such as spark gap 26) arranged to discharge one only of each pair of strip transmission lines and generate voltage pulses between the ends of a given sheet of each pair. The two strip transmission lines may be arranged either in series as shown or in parallel as in Figs. 1, 2 (not shown). The inner and outer transmission lines may be wound in opposite directions, or as in Fig. 1 (not shown), in the same direction. The load may be connected via a further spark gap (Fig. 4, not shown) to point 27, the further spark gap being arranged to break down at the peak value of the short-duration triangular shaped, high voltage pulse generated by closing switch 26. Alternatively, the further spark gap in the load circuit may be applied to the pulse generator described in Specification 975,911, having one pair of strip lines.

1,161,347. Pulse generating circuits. UNITED KINGDOM ATOMIC ENERGY AUTHORITY. 2 Oct. 1967 (21 Oct. 1966). No. 47424/66. Heading H3P. (Also in Division H1)

A pulse generator comprises at least one capacitive energy store comprising at least two electrodes 15, 19 having the space between them filled with a polar liquid of high dielectric constant the configurations of said electrodes being such that when a voltage is applied between them a greater electric field

the bit drivers associated with the elements which are to store a "0" are coincidentally pulsed to generate a total field  $H_{\text{tot}}$  in these elements, sufficient to overcome the self-demagnetizing field and saturate the storage films. The word pulse alone is insufficient to drive the remainder of the elements from the "1" to the "0" state. Data is read out by supplying a relatively small pulse to a word line in the same direction as the "0" write pulse. This drives the read films of "1" storing elements towards saturation along the hard axis and induces an output in sense line 60, while "0" storing films are merely driven further into saturation. It is stated that a "1" may be represented by a level of magnetization of the storage film which is a substantial proportion of the "0" magnetization level, for example 50%. The self-demagnetizing field of the storage film is preferably equal to the sum of the self-demagnetizing and anisotropy fields of the read film along the hard axis, and the coercive force of the storage film is greater than or equal to the anisotropy field of the read film. Switching of the storage film takes place by a parallel-modes operation (domain-wall motion) rather than by rotation.

1,087,933. <sup>1</sup>Pulse generating circuits. UNITED KINGDOM ATOMIC ENERGY AUTHORITY. Oct. 5, 1964 [Oct. 10, 1963], No. 39993/03. Addition to 975,911. Heading H3P.



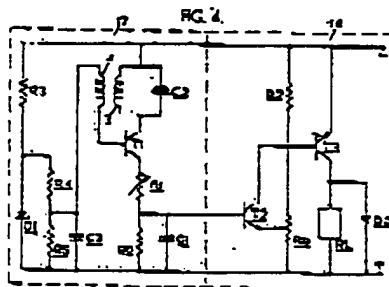
A pulse generator comprises two pairs of mutually insulated electrically conducting sheets 21, 22, 21', 22' rolled together to form two pairs of strip transmission lines, one of said pairs being located concentrically within the other and switch means (such as a spark gap 26) arranged to discharge one only of each pair of strip transmission lines and generate voltage pulses between the ends of a given sheet of each pair. The two strip transmission lines may

be arranged either in series as shown or in parallel as in Figs. 1, 2 (not shown). The inner and outer transmission lines may be wound in opposite directions or, as in Fig. 1 (not shown), in the same direction. The load may be connected via a further spark gap (Fig. 4, not shown) to point 27, the further spark gap being arranged to break down at the peak value of the short-duration triangular-shaped, high voltage pulse generated by closing switch 26. Alternatively, the further spark gap in the load circuit may be applied to the pulse generator described in Specification 975,911, having only one pair of strip lines.

1,087,938. Data transmission systems. TELEFUNKEN PATENTVERWIRTSCHAFTUNG GmbH. Feb. 5, 1965 [Feb. 23, 1964], No. 6110/65. Heading H4P.

In an error-correcting digital transmission system in which the data is transmitted in blocks, up to  $n$  errors are detected and/or corrected by means of a redundancy check, and in addition the data is checked for faults, e.g. missing or mutilated digits. If the number of such faults is at least  $n$ , or if the redundancy check reveals an uncorrectable error, a repetition-requesting signal is issued. This signal is also issued if the number of digits received between successive fault signals in a block is at least equal to the length of the longest error burst that can be detected or corrected by the redundancy check.

1,087,950. Semi-conductor circuits. ENGLISH ELECTRIC CO. Ltd. Sept. 21, 1966 [Sept. 24, 1965], No. 40753/65. Heading H3T. [Also in Division G1]



The pointer of a meter (or a vane associated therewith) travels through an air-gap in the magnetic circuit of an oscillator coil, Fig. 1 (not shown) to vary the amplitude of the oscillator output to effect an alarm or control function, when the pointer lies outside a selected range. Separate coils may be used at the up and lower limits. Alternatively, Fig. 3 (not shown), a